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09/744,677	01/29/2001	Michael Koch	PM276642	3016

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EXAMINER

LE, DUY K

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,677

Applicant(s)

KOCH ET AL.

Examiner

Duy K Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because the elements in the drawings need to have descriptive labels. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Donovan et al. (U.S. Patent 6,075,982).

As to claim 1, Figures 1, 3A, and 3B in Donovan disclose a telecommunications method for establishing a connection with the mobile device of a participant, in which telecommunications method a desired destination number transmitted in a short message prepared by the participant is passed on to a callback computer, and in which telecommunications method a connection is established by this callback computer between said mobile device of the participant and said desired destination number (“when the prepaid subscriber 104 enters calling information (i.e., dials a telephone number) via the wireless handset

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106, the wireless handset 106 signals to a mobile switching center 108” (Col. 3, lines 60-63).

“The mobile switching center 108 directs the call to the wireless enhanced service platform 112” (Col. 4, lines 3-4). “The wireless enhanced service platform 112 routes debit calls to the prepaid platform 116” (Col. 4, lines 25-26)), wherein

before establishment of said connection, the remaining credit of said participant is checked in a prepaid module connected to the callback computer, and said connection is established only if this credit suffices (“the prepaid platform 116 determines whether the subscriber 104 has sufficient funds in his or her account to connect the call” (Col. 4, lines 34-37). “If there are sufficient funds, step 328 is performed. In step 328, the prepaid platform 116 sets up the call to the local exchange network 118” (Col. 11, lines 28-30)).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Walker (U.S. Patent 5,825,863) and further in view of Kasai et al. (U.S. Patent 5,815,560).

As to claim 2, the Donovan reference discloses the telecommunications method according to claim 1. However, it does not disclose the prepaid module calculates the remaining airtime with the aid of at least one tariff table and passes it on to the callback computer. The

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Walker reference teaches the prepaid module calculates the remaining airtime and passes it on to the callback computer ("the call processing computer 12 determines the current balance therein at step 44. The current balance of the account, as well as other cardholder information (e.g., billing information), is also stored in authorized cardholder accounts database 26. The balance of the account can be characterized as a monetary value, call time values or units values" (Col. 4, lines 37-43). "When the cardholder's calling-card account has a sufficient balance to cover the cost of the telephone call to the called telephone station 22, the call processing computer 12 retrieves the called number from the storage memory 24 and communicates the called number to the central switching network 16" (Col. 4, lines 62-67)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Donovan wherein the prepaid module calculates the remaining airtime and passes it on to the callback computer, as taught by Walker, in order to determine whether a prepaid account has a sufficient balance to cover the cost of a call.

However, Donovan-Walker does not disclose the use of a tariff table to calculate the remaining airtime. The Kasai reference teaches the use of a tariff table to calculate the cost of a call and thus remaining airtime of a prepaid account ("the tariff table determination database as shown in FIG. 19 using the routing number as the object is also provided. As its output result, a telephone tariff table (for first three minutes, each minute after first three minutes, additional tariff and discounted tariffs for time and day, etc.) is previously set" (Col. 8, lines 50-55)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Donovan-Walker wherein the prepaid module calculates the remaining airtime with the aid of at least one tariff table and passes it on to the

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callback computer, as taught by Kasai, in order to determine the time value of the remaining prepaid balance to cover the cost of a call.

As to claim 3, as cited in claim 2, Donovan-Walker-Kasai discloses the telecommunications method according to claim 2, wherein the prepaid module calculates said airtime on the basis of the indication of location of said participant stored in a database ("The balance of the account can be characterized as a monetary value, call time value or units value. Employing a units value enables different charges to be made for local, long distance or international calls, as well as an adjustment to be made for factors such as the time, date and/or week when the call is placed and the like" (Walker, Col. 4, lines 38-46)).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Walker (U.S. Patent 5,825,863) in view of Kasai et al. (U.S. Patent 5,815,560) and further in view of Alvesalo (U.S. Patent 5,384,824).

As to claim 4, Donovan-Walker-Kasai discloses the telecommunications method according to claim 3. The Donovan reference further discloses the database is the home location register of the HPLMN of the participant ("the wireless enhanced service platform 112 routes calls by accessing information in the home location register 110" (Col. 4, lines 8-10). "In step 312, the wireless enhanced service platform 112 queries the home location register 110 for routing information. The home location register 110 maintains two types of subscriber information: subscription information and location information" (Col. 6, lines 38-42)). However, Donovan-Walker-Kasai does not expressly disclose the indication of location is the VLR address of the participant. The Alvesalo reference teaches the indication of location is the VLR address of the participant ("within the GSM network the new location information is stored

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in a known manner in a Visitor Location Register (VLR), which updates the location information in the Home Location Register (HLR) if the mobile station is not previously known thereto” (Col. 4, lines 26-30)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Donovan-Walker-Kasai wherein the indication of location is the VLR address of the participant, as taught by Alvesalo, in order to provide new location indication of a mobile to the HLR.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Walker (U.S. Patent 5,825,863).

As to claim 5, the Donovan reference discloses the telecommunications method according to claim 1. However, it does not disclose the connection is truncated by the callback computer if the remaining credit of the participant has run out. The Walker reference discloses “once the telephone call is connected, the balance of the calling-card account is debited and monitored” (Col. 6, lines 19-20). “If the account balance falls below a predetermined minimum, the call processing computer 12 accesses the cardholder entered information database 28 to determine whether to charge the cardmember’s second account at step 98” (Col. 6, lines 23-27). “If additional charges are not authorized, then the call processing computer sends a message to that effect at step 104, and the call is disconnected” (Col. 6, lines 29-32).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Donovan wherein the connection is truncated by the callback computer if the remaining credit of the participant has run out, as taught by

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Walker, in order to monitor and terminate a call when there is insufficient debit to cover the cost of the call.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Joensuu et al. (U.S. Patent 5,966,653).

As to claim 6, the Donovan reference discloses the telecommunications method according to claim 1. However, it does not disclose the mobile device is a GSM device and the short message is a USSD message. The Joensuu reference discloses "with the introduction of the Global System for Mobile (GSM) or Personal Communications System (PCS), call forwarding subscriber feature activations are no longer performed over a traffic channel" (Col. 4, lines 30-33). "A number of different connection-less communications protocols have been introduced to transport unstructured user defined data between a mobile station and a serving MSC. Such protocols can be further utilized to transport user entered forward-to-number from the mobile station to the serving MSC for the purposes of activating a call forwarding feature. One such protocol is an Unstructured Supplementary Service Data (USSD) messages" (Col. 4, lines 47-54).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Donovan wherein the mobile device is a GSM device and the short message is a USSD message, as taught by Joensuu, in order to request an activation of a subscriber feature from a mobile station without establishing a speech connection with the serving MSC.

9. Claims 7, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Kasai et al. (U.S. Patent 5,815,560).

As to claim 7, Figure 1 in Donovan discloses a system for establishing a connection with the mobile device 106 of a participant 104, which system can receive short messages and can identify the participant who has sent these short messages, which system comprises a callback computer 112, which can establish a connection between said participant and a destination number indicated in said short message, wherein it comprises a prepaid module 116 which is connected to said callback computer 112 and in which a prepaid amount can be stored for at least certain participants (“when the prepaid subscriber 104 enters calling information (i.e., dials a telephone number) via the wireless handset 106, the wireless handset 106 signals to a mobile switching center 108” (Col. 3, lines 60-63). “The mobile switching center 108 directs the call to the wireless enhanced service platform 112” (Col. 4, lines 3-4). “The wireless enhanced service platform 112 routes debit calls to the prepaid platform 116” (Col. 4, lines 25-26). “The prepaid platform 116 determines whether the subscriber 104 has sufficient funds in his or her account to connect the call” (Col. 4, lines 34-37). “If there are sufficient funds, step 328 is performed. In step 328, the prepaid platform 116 sets up the call to the local exchange network 118” (Col. 11, lines 28-30)).

However, it does not disclose the prepaid module contains at least one tariff table with which the remaining airtime can be calculated. The Kasai reference teaches the use of a tariff table to calculate the cost of a call and thus remaining airtime of a prepaid account (“the tariff table determination database as shown in FIG. 19 using the routing number as the object is also provided. As its output result, a telephone tariff table (for first three minutes, each minute after first three minutes, additional tariff and discounted tariffs for time and day, etc.) is previously set” (Col. 8, lines 50-55)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Donovan wherein the prepaid module contains at least one tariff table with which the remaining airtime can be calculated, as taught by Kasai, in order to determine the time value of the remaining prepaid balance to cover the cost of a call.

As to claim 9, as cited in claim 7, Donovan-Kasai discloses the system according to claim 7, wherein the prepaid module can calculate the remaining airtime of a said participant on the basis of indications of location of said participant stored in a home location register of the system (Donovan; "the home location register 110 maintains two types of subscriber information: subscription information and location information" (Col. 6, lines 40-42). "One type of location information is the last mobile switching center 108 that was registered as serving the subscriber 104. Other location information is used to calculate tax on the cost of a call" (Col. 6, lines 46-50)) and with the aid of said tariff table (Kasai; "the tariff table determination database as shown in FIG. 19 using the routing number as the object is also provided. As its output result, a telephone tariff table (for first three minutes, each minute after first three minutes, additional tariff and discounted tariffs for time and day, etc.) is previously set" (Col. 8, lines 50-55)), and can pass it on to said callback computer.

As to claim 11, Donovan-Kasai discloses the system according to claim 7. The Donovan reference (Figure 1) further discloses an interface module 112, which can take over the contents of a short message sent to a home location register 110, and can pass it on together with the call number and location indication, stored in this home location register 110, for the participant who has sent the short message ("the wireless enhanced service platform 112 routes calls by accessing information in the home location register 110" (Col. 4, lines 8-10). "In step 312, the wireless

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enhanced service platform 112 queries the home location register 110 for routing information.

The home location register 110 maintains two types of subscriber information: subscription information and location information” (Col. 6, lines 38- 42). “The subscriber is identified using a mobile identification number. Location information is used to properly route and bill the call. In step 314, the home location register 110 returns to the wireless enhanced service platform 112 a prepaid routing number, the subscriber’s mobile switching center identification number, and the location identifier for tax calculation” (Col. 6, lines 51-57)).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Kasai et al. (U.S. Patent 5,815,560) and further in view of Sjodin (U.S. Patent 6,631,140).

As to claim 8, Donovan-Kasai discloses the system according to claim 7, wherein said prepaid module can be connected to a home location register of the system (“in step 312, the wireless enhanced service platform 112 queries the home location register 110 for routing information. The home location register 110 maintains two types of subscriber information: subscription information and location information” (Col. 6, lines 38- 42). “In step 316, the wireless enhanced service platform 112 sends a transaction capabilities application part message to the prepaid platform 116 to transfer information needed to process and bill the prepaid wireless call” (Col. 6, line 66 to Col. 7, line 2)). However, it does not disclose the connection is via a MAP interface. The Sjodin reference teaches use of a MAP interface to connect an HLR to a mobility server (Figure 2; “mobile application part (MAP) interfaces are introduced into the mobility servers 48 and 52, respectively. The MAP is specified in European Telecommunications Standard (ETS) 300599, GSM 09.02 version 4.11.1, November 1995” (Col. 7, lines 61-64).

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“Five conventional MAP operations are supported by the MAP interface. Namely, update location (which is termed “registration notification” in IS-41), insert subscriber data, delete subscriber data, cancel location, and provide roaming number (termed “routing request” in IS-41) operations are supported by the MAP interface” (Col. 8, lines 2-8)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Donovan-Kasai wherein the prepaid module can be connected to a home location register of the system via a MAP interface, as taught by Sjodin, in order to provide a standard interface for communicating with an HLR for different operations.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Kasai et al. (U.S. Patent 5,815,560) and further in view of Joensuu et al. (U.S. Patent 5,966,653).

As to claim 10, Donovan-Kasai discloses the system according to claim 7. However, it does not disclose the mobile device is a GSM device and the short message is a USSD message. The Joensuu reference discloses “with the introduction of the Global System for Mobile (GSM) or Personal Communications System (PCS), call forwarding subscriber feature activations are no longer performed over a traffic channel” (Col. 4, lines 30-33). “A number of different connection-less communications protocols have been introduced to transport unstructured user defined data between a mobile station and a serving MSC. Such protocols can be further utilized to transport user entered forward-to-number from the mobile station to the serving MSC for the purposes of activating a call forwarding feature. One such protocol is an Unstructured Supplementary Service Data (USSD) messages” (Col. 4, lines 47-54).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Donovan-Kasai wherein the mobile device is a GSM device and the short message is a USSD message, as taught by Joensuu, in order to request an activation of a subscriber feature from a mobile station without establishing a speech connection with serving MSC.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,075,982 to Donovan et al. in view of Kasai et al. (U.S. Patent 5,815,560) in view of Sjodin (U.S. Patent 6,631,140) and further in view of Joensuu et al. (U.S. Patent 5,966,653).

As to claim 12, Donovan-Kasai discloses the system according to claim 11. However, it does not disclose the interface module accesses the home location register by means of the MAP protocol via the SS7 signal signaling system, and wherein the short message is a USSD message. The Sjodin reference teaches means of the MAP protocol via the SS7 signaling system to connect an HLR to a mobility server (Figure 2; "mobile application part (MAP) interfaces are introduced into the mobility servers 48 and 52, respectively. The MAP is specified in European Telecommunications Standard (ETS) 300599, GSM 09.02 version 4.11.1, November 1995" (Col. 7, lines 61-64). "Five conventional MAP operations are supported by the MAP interface. Namely, update location (which is termed "registration notification" in IS-41), insert subscriber data, delete subscriber data, cancel location, and provide roaming number (termed "routing request" in IS-41) operations are supported by the MAP interface" (Col. 8, lines 2-8). Figures 7 and 22 show SS7 signaling channel from HLR to the mobility servers 48A, 52A).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Donovan-Kasai wherein the interface module

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accesses the home location register by means of the MAP protocol via the SS7 signal signaling system, as taught by Sjodin, in order to provide a standard interface for communicating with an HLR for operations.

However, Donovan-Kasai-Sjodin does not disclose the short message is a USSD message. The Joensuu reference discloses "a number of different connection-less communications protocols have been introduced to transport unstructured user defined data between a mobile station and a serving MSC. Such protocols can be further utilized to transport user entered forward-to-number from the mobile station to the serving MSC for the purposes of activating a call forwarding feature. One such protocol is an Unstructured Supplementary Service Data (USSD) messages" (Col. 4, lines 47-54).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Donovan-Kasai-Sjodin wherein the short message is a USSD message, as taught by Joensuu, in order to request an activation of a subscriber feature from a mobile station without establishing a speech connection with the serving MSC.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Martineau (U.S. Patent 5,915,226) discloses prepaid smart card in a GSM based wireless telephone network and method for operating prepaid cards.

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b. Aebi et al. (U.S. Patent 6,375,073) discloses method for crediting or recrediting a data card with a given amount.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy K Le whose telephone number is 703-305-5660. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Duy Le
November 19, 2003


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600